REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

The Examiner included an IDS form for an already acknowledged IDS. Applicants again respectfully request that the Examiner acknowledge consideration of the foreign patent documents cited in the Information Disclosure Statement specifically filed on June 11, 2001. An initialed copy of the 1449 form for that IDS is requested.

Applicants appreciate the indication of allowable subject matter in claim 24. It seems that analogous method claim 6 should also be indicated as allowable.

Claims 1-6, 9, 10, 14-23, 27, 28, 32, and 33 stand rejected under 35 U.S.C. §103 as being obvious based on U.S. Patent 6,208,620 to Sen et al and newly-applied Paul et al. This rejection is respectfully traversed.

Sen relates to a system that carries a TCP connection over a wireless link. Sen discloses an application layer 221 on the top of a protocol stack in a mobile station 201. Sen teaches a TCP-aware agent sublayer (TAS) in the wireless access gateway (WAG) 203 for caching TCP packets and corresponding acknowledging packets. The WAG protocol stack does not have an application layer. The TAS is at a transport TCP layer lower than an application protocol layer. A link monitoring agent 211 (see Figure 2) monitors the condition of a wireless transmission channel (RLP 213) for the occurrence of a predefined fault. When the fault is a radio link packet loss, the lost packet is immediately retransmitted from the TAS cache. When the fault is a temporary disconnect, a congestion window of the TCP source is closed.

The Examiner admits that Sen fails describe video data, processing video data, or coding/transcoding video data. The claims in this case all require coding or transcoding of video

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data at the application layer. The Examiner relies on Paul which teaches a "layered" video multicast transmission system with retransmission-based error recovery. The Examiner's attention is directed to Paul's explanation of layered encoding schemes that separate an encoded video stream into two or more layers: one base layer and one or more enhancement layers. Paul's LVMR protocol includes an application layer, an application control layer, and a transport layer. Independent layers of video substreams are generated from an encoded video stream and multi-cast. A receiver implements rate control by selecting one or more of the independent substreams/layers based on a congestive state of a receiver and the network.

The Examiner proposes modifying Sen with Paul "for the benefit of providing access to an additional type of media." But even if theses two references were combined, they still fail to teach the combination of features recited in the independent claims 1, 16, and 32. The application layer in Paul codes video data, but there is no teaching of "acquiring a value of one or more transmission condition parameters indicative of transmission conditions in the network...specific for a second layer provided lower than said first application layer." Paul states at column 3, lines 19-21: "*within each layer*, a retransmission based recovery mechanism is implemented whereby recovery occurs within a budget of time, e.g., a time window" (emphasis added). So Paul performs recovery *within each layer* and teaches away from the claimed use at the applications layer of transmission condition parameters from a lower different layer. There certainly is no teaching in Paul of coding or transcoding of video data at the application layer 102 using transmission condition parameters from the lower protocol layers 104 and 106.

Regarding Sen, the Examiner reads the claimed application layer onto **both** the application layer 221 and the TAS layer 209 (see page 5 of the official action). But that reading

is not reasonable. The TAS layer is not an application layer. It is clearly defined by Sen as a TCP layer. The TAS layer 209 is in the WAG 203 protocol stack that does not have any application layer. The top of the WAG stack is the TAS layer. Moreover, the MS protocol stack clearly defines an application layer 221. One of ordinary skill in the art would not read the transport TAS layer 209 onto the claimed application layer. The text the Examiner relies on in col. 8, line 45-col. 9 relates to the TAS layer 209 in the WAG protocol stack—it does not have anything to do with the application layer 221. Sen's focus is on predicting a disconnection based on an channel state estimation algorithm. The channel state or conditions detected by the link agent in the WAG protocol stack is not used to code or transcode of video data at the application layer as recited in the independent claims. Even if the application layer 221 did incorporate Paul's application layer video coding or transcoding, the application layer 221 does not receive and use the channel feedback from the link monitoring agent. That channel feedback is instead only used by the TAS layer 209 which is not the application layer 221 (or any type of application layer).

So the combination of Sen and Paul fail to teach:

- acquiring a value of one or more transmission condition parameters indicative of transmission conditions in the network, where said one or more transmission condition parameters are specific for a second layer provided lower than said first application layer,
- deriving one or more values of one or more video control parameters from said value of said at least one transmission condition parameter,
- providing to said first application layer said derived one or more values, and
- performing at said first application layer controlling of the processing of video data including coding or transcoding of video data in accordance with said derived one or more values.

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The Federal Circuit *requires* consideration of the problem confronted by the inventor in determining whether it would have been obvious to combine references in order to solve that problem. *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 935 (Fed. Cir. 1990). Indeed, the Examiner must show reasons why one of ordinary skill in the art, confronted with the same problem as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. See *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

The claims address a problem with how to control the coding or transcoding of video data at the application layer based on transmission conditions in the network acquired at a lower protocol layer and provided to the application layer. Sen specifically deals with a different problem at the transport layer. Indeed, Sen proposes a scheme that improves the retransmission properties of a TCP connection when a wireless link is involved. But retransmission is normally not desirable in connection with video streaming, due to its delay sensitivity. Paul's focus is on rate control based on video substream selection at the receiver. Neither reference then confronts the same problem as the instant inventors. Absent that recognition, it is clear that the Examiner's attempted combination lacks the requisite motivation. The *Rouffet* Court warned against "rejecting patents solely by finding prior art corollaries for the claimed elements" because that would "permit an Examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art." *In re Rouffet*, 149 F.3d at 1357. That approach was found by the Federal Circuit to be "an illogical and inappropriate process by which to determine patentability." *Sensonics v. Aerosonic Corp.*, 85 F.3d 1566, 1570 (Fed. Cir. 1996).

Regarding the dependent claim 2, the Examiner refers to the link conditions being those of the Internet 205. This does not make sense since the WAG's link monitoring agent is focused on the wireless link—not the Internet.

Regarding the official notice positions by the Examiner, modifying Sen to include FEC does not teach that the derived video control parameters from the lower protocol layer are used to perform FEC of video data at the application layer. Sen by admission lacks any control of video data. That power control is known does not make obvious the use of current power level on a network link in coding or transcoding video data as recited in claims 11 and 29.

Claims 12, 13, 30, and 31 stand rejected for obviousness based on the combination of Sen in view Li (U.S. 6,275,531). This rejection is respectfully traversed.

Claims 13 and 31 describe a system with at least two independent bitstreams of video data, and one of the bitstreams is selected on the basis of the derived video control values. In contrast, Li describes using a base layer and one or more enhancement layers. As a consequence, there is always a base layer present. Consequently, there is no teaching of selecting between two or more independent video streams. The Examiner's suggested wording for claims 13 and 31 has been adopted.

Accordingly, the rejections should be withdrawn. The application is in condition for allowance. An early notice to that effect is earnestly solicited.

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Respectfully submitted,

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